



UNITED STATES PATENT AND TRADEMARK OFFICE

2
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|--|---------------------|------------------|
| 10/517,536 | 12/10/2004 | Johann Reiner Godefridus Cornelis Maria Van Beek | NL 020542 | 1611 |
| 24737 | 7590 | 03/08/2007 | EXAMINER | |
| PHILIPS INTELLECTUAL PROPERTY & STANDARDS | | | WILLIAMS, ARUN C | |
| P.O. BOX 3001 | | | ART UNIT | PAPER NUMBER |
| BRIARCLIFF MANOR, NY 10510 | | | 2838 | |
| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE | | |
| 3 MONTHS | 03/08/2007 | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| Office Action Summary | Application No. | Applicant(s) |
|------------------------------|------------------------|---------------------|
| | 10/517,536 | VAN BEEK ET AL. |
| | Examiner | Art Unit |
| | Arun Williams | 2809 |

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 04 June 2003.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 1-10 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/10/2004.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
5) Notice of Informal Patent Application
6) Other: ____.

DETAILED ACTION

Claim Objections

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Koenck et al, (Koenck), USPAT 6,043,630.**

As for claim 7, Koenck discloses (col. 3, lines 19-30) and shows in Fig. 28 a charger for charging a rechargeable unit such as a rechargeable battery or rechargeable battery pack, comprises:

– a charge regulator (applicant's supply unit) comprised of a voltage controlled current source (20) (applicant's control unit) whose output current is controlled by the level of the charge control signal (14), thus meets the limitations "supply unit for supplying charging current to a rechargeable unit and a control unit for controlling the current supplied by supply unit" (col.5, lines 63-67);

- Koenck shows in Fig. 28 terminals connecting the charger regulator (applicant's supply unit) to the rechargeable battery (16) and the voltage being sensed (applicant's monitoring);

- applying the appropriate charge value (applicant's initial charging current) from a fast charge parameter table (applicant's predetermined maximum charging voltage) and decreasing the current with respect to temperature, but keeping the fast charge operational until the battery is fully charged (col. 8, lines 1-12).

As for claim 1, Koenck merely disclose the method of charging a rechargeable unit without adding any additional steps and thus would have been inherent in view of the device.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. **Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koenck in view of Falcon,(Falcon),USPAT 5,600,226.**

As for claims 2 and 3, Koenck differs from the claimed invention because he does not explicitly disclose an initial charging voltage reaches a predetermined maximum charge within 2 minutes and the charging current being more than 1 C-rate.

Falcon discloses (col. 13, lines 31-33) applying a charge to a battery wherein the full-charge rate (applicant's predetermined maximum charging voltage) is achieved in two minutes. Furthermore, Falcon discloses (col. 12, lines 60-63) having an initial charging current more than 1 C-rate.

Falcon is evidence that ordinary skill in the art would find a reason, suggestion or motivation to use a charging current at a rate more than 1 C and reaching the maximum charging voltage within 2 minutes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Koenck by for advantages such as avoiding damage to the battery (col. 2 line 3), as taught by Falcon.

8. Claims 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koenck in view of Richter et al, (Richter), USPAT 4,698,579.

As for claim 4, Koenck differs from the claimed invention because he does not explicitly disclose the rechargeable unit is charged to maximally 75% of it's maximum capacity and ending the charging process.

Richter discloses (col.1, lines 37-63) and shows in Fig. 1 a charger for a battery operated surgical machine that charges the battery to 75% of its maximum capacity therefor ending the charging process.

Richter is evidence that ordinary skill in the art would find a reason, suggestion or motivation to charge a battery to a portion of its capacity.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Koenck by charging a battery to a portion of its capacity for advantages such as, preventing premature exhaustion (col.1, line 62), as taught by Richter.

9. Claims 5, 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koenck in view of Kaite et al,(Kaite), USPAT 5,589,755.

As for claim 6 and 9, Koenck differs from the claimed invention because he does not explicitly disclose the rechargeable unit comprising a lithium battery, measuring the

depth of the charge and interrupting the charging procedure at a predetermined depth of charge.

Kaite discloses (col. 3, lines 8-11) and shows in Fig. 3 a charging apparatus that has a lithium battery (1) wherein the state of charge (applicant's depth of charge) is detected during charging unit a fully charge state (applicant's predetermined depth of charge) is detected (col. 3, lines 1-6).

Kaite is evidence that ordinary skill in the art would find a reason, suggestion or motivation to use a lithium battery, as it's rechargeable unit and detecting the depth of charge.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Koenck by using a lithium battery, as it's rechargeable unit and detecting the depth of charge for advantages such as providing a reduction in charging time with improved detection of the fully charged state (col.2, lines 15-16), as taught by Kaite.

As for claim 5, Koenck modified by Kaite discloses the claimed invention except for measuring the initial depth of charge before a charging process and ending the charging process if the rechargeable unit initial depth of charge is higher than a predetermined maximum initial depth of charge. However, it is notoriously well known in the art to detect the initial depth of state of a rechargeable battery before the changing process and discontinuing the charging process if the state of charge is greater than a predetermined depth of charge for reasons such as, preventing the battery from overcharging and thus would have been obvious.

10. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koenck in view of Mullersman, (Mullersman), USPAT 4,297,630.

As for claims 8, and 10, Koenck differs from the claimed invention because he does not explicitly disclose a boost charging mode and a normal charging mode. Further, Koenck fails to disclose the initial charging current being more than 1 C-rate.

Mullersman discloses (col. 2, lines 47-55) and shows in Fig.1 a charger with a reliable switching mode between the slow-rate charging mode (applicant's normal charging mode) wherein the current constant is a low rate (col. 5, lines 42-44) and the fast-rate charging mode (applicant's fast charging mode) (col.3, lines 52-57) wherein the constant current is a high rate until the battery capacity is full. Furthermore, Mullersman discloses (col. 3, lines 56-57) interrupting the charging process after 12 minutes, thus meets the limitation "the charger comprises a timer function for interrupting the charging process after a predetermined time interval".

Mullersman is evidence that ordinary skill in the art would find a reason, suggestion or motivation to use a switch that has a boost charging mode and a normal charging mode.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Koenck by using a switch that has a boost charging mode and a normal charging mode for advantages such as improving the usefulness in the consumer market where economy of manufacture is so important (col.2, lines 53-54), as taught by Mullersman.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPAT 6,104,166, discloses a variation of the charged amount among battery blocks. USPAT 5,589,755, discloses a secondary battery is charged with a constant voltage while a charging current generated by a the application of the constant voltage is monitored. USPAT 3,622,857, discloses a battery is charged in a very short period of time and uses the internal impedance to vary the charging rate for different batteries.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun Williams whose telephone number is 571-272-9765. The examiner can normally be reached on Mon - Thurs 6:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur Chowdhury can be reached on 571-272-2287. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Arun Williams
Examiner
Art Unit 2809

AW

Kimberly D. Nguyen
Kimberly D. Nguyen
Primary Examiner
AU 2876